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Class:6B

Title of experiment:

Reaction Time

Aim:

How does the time to adapt to a situation affect the students' reaction time?

Background:

Reaction Time - We are dropping a ruler and the student has to catch it, we measure the reaction time by checking where the hand is gripping on the rulers, we measure it in centimeters.

Example: *Reaction task - A meter ruler is dropped and the participants have to catch the ruler. Reaction Time: measured by the length of ruler when caught by participants. The shorter the length, the faster the reaction time (-Michael N.)*

Hypothesis:

The more chance the participant gets to catch the ruler, the more time the student would have to adapt, and learn a good technique.

Scientific Understanding:

The person who is catchings senses become used/familiar to doing the task, it is like people who works in a (for example) wrapping shop, they do it every day and they get really used to it and they get better and better for each time they are doing it.

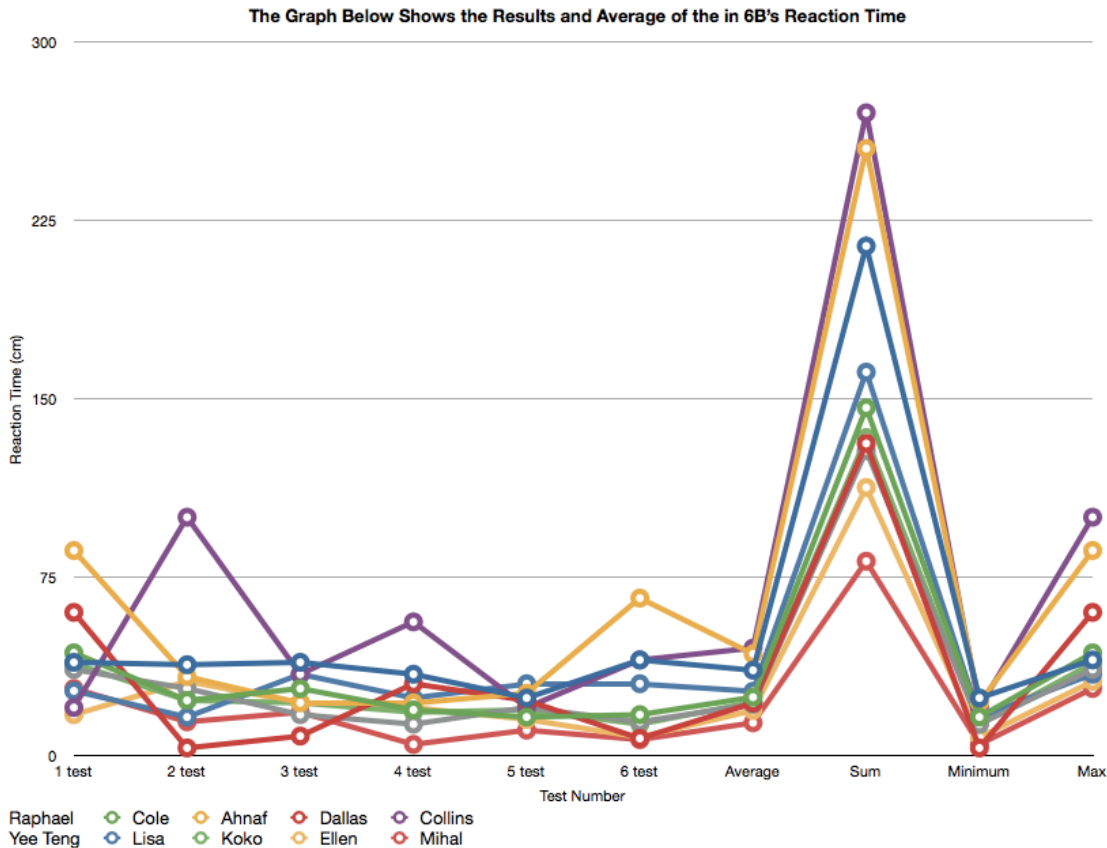
Humans brain wiring is becoming more and more efficient for each time, and better networked when they are really into the task and are really focused. Pathway between the neurons are adapted, it is like a road it built instead of driving in the forest, so that the signals the brain is sending to the muscles can get there faster. Because of that, the reaction time the person get would be shorter and shorter for each time. **this is awesome!**

Example: *Senses become sharper as the participants become more familiar to the task, particularly hearing and vision senses. Participants may begin to observe the drop, by body language and anticipate the moment of drop.*

Our brains' wiring become more efficient and better networked when they focus on a task. Pathway between neurons are changed or adapted so that signals can flow better so that the brain coordinates with muscles more quickly. Therefore the reaction time would be shorter. (-Michael N)

Independent variable:

In between each of the drops, the participant have around 10 seconds or so to adapt their pathway between the neurons. Since the ruler is being dropped six times, the participant will have about a minute in total to adapt the wiring, which will help you to.



Each time when the ruler is drop, participants have about 10 more seconds to adapt to the reaction task. Since the ruler will be dropped six times, participants would have about one minute to adapt at the sixth trial. (-Sheenin B)

Dependent variable:

The meter ruler that was being dropped, was dropped six times. For each time the meter ruler was dropped, the person catching it had to try to catch the ruler as quick as possible. Each of the times the ruler was being dropped, the data was recorded on a numbers spreadsheet. The number we could see right above from where we caught the ruler. After we had done all the trials, we would calculate the sum, average, minimum and maximum for each participant in the spreadsheet.



The ruler was being dropped for six times. Each time the ruler was dropped, the participant must catch the ruler as fast as possible. Each record is taken after each of the six trials. The mark that is right above our hand is the measurement which we will record, and round off to the nearest whole number. After the sixth trial, the sum, average, minimum, maximum and count of

each participant's measurements were calculated in a table. (-Sheenin B.)

Controlled variable:

- Had to have your hand under the ruler, in the handshake position
- Were only allowed to look at your hand, or at the floor. We were not allowed to look at the droppers hand, because then it would be easy, and you would know when the dropper was dropping the ruler.
- Everyone got to catch the ruler four times first with the first method, and two times for the second method, where the player had to say I am ready before the dropper was allowed to drop it.
- Use the same ruler for all the dropps

Conclusion

refer to my SOR; did not follow format

The hypothesis was accurate mainly, most of the time but some people did not get better and better. They would get better and better, but then they would get worse score, and then they would keep on following the pattern downwards. The participants got better and better for each time.

Evaluation:

From this science experiment I learned more about the “*numer*” application, I got learned to use the sum, average, minimum and maximum tools. Also, I learned how to make new pages for the *graphs, and how to put them on the page. I also learned how to make the graph, and how to label the y and x axis.*

What we could have improved, the flaws we had, on was:

- that we could have had the same person to drop the ruler for everyone, then everyone would have gotten the same drop, and it would have been way more accurate. Some people are better at dropping than others.
- We could also have improved on dropping the ruler from the same height, which also means that the same person should have been dropping the ruler for everyone.
- Then, lastly we could have had more people to record the length, because when there was only one person recording, and there were like 5 people saying the time, there were some confusion and there might have been some errors, which actually happened.